

Work Order ID 162401***162401***

Page 1

Item ID: D117-840-011

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: BK117/EC145 Bearpaws with Wearplates

Start Date: 6/5/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 6/8/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: **DAS** Date: **JUN 12 2017** Tooling: _____ Date: _____
21
QC: **9-89** Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
IIN-D117-840	C	JUN 16 2017	DAS	6					
		9-89							
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork Photocopy bluefile & type labels per PPP D117-840-011 CHG 003									
160	Pick Kit	0.00							
160									
Packaging	Memo	0.00							
Packaging									
170	QC4- 100% Inspect kits for completeness	0.00							
170									
QC	Memo	0.03							
Quality Control									

DAS
27
9-89**JUN 19 2017****JUN 16 2017****DAS**
6
9-89
DAS
28
9-89**DAS**
27
9-89**JUN 16 2017**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 162401

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162401

Page 2

Item ID: D117-840-011

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N900040100Setup Start ***NS1***

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180

Identify as per dwg & Stock Location: _____

0.00

180

Packaging

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D117-840-011

Location: _____

PPP Rev: _____

fg 015

DAS
27
9-89

JUN 19 2017

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.10

Quality Control

DAS
21
9-89

JUN 19 2017

DAS
21
9-89

JUN 19 2017

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
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OTHER : _____																					

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D117-840-011

Required Date: 6/8/2017

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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DAS JUN 16 2017

6
9-89

DAS 28

**DAS
27
9-89**

12

304

304

160

160

8

JUN 16 2017

AS
28
9

**DAS
27
9-89**

6

6

40

40

4

JUN 16 2017

17 1AS
28
19

DAS
27
9-89

47

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Shop Packet Print

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Picklist Print

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Work Order ID: 162401

162401

Parent Item: D117-840-011

D117-840-011

Parent Item Name: BK117/EC145 Bearpaws with Wearplates

Start Date: 6/5/2017

Required Date: 6/8/2017

Start Qty: 1.00

Required Qty: 1.00

D5377-1
Manufactured No
D5377-1
Bearpaw

160 Each 2.0000

**

JUN 16 2017

DAS 28
6 9-89

DAS 27
9-89
D5378-041
Manufactured No
D5378-041
Bearpaw Wearplate Assembly

Location

Loc Qty

Loc Code

ST414

2

157367

2

160 Each 4.0000

**

JUN 16 2017

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

ST604

4

157323

4

D5379-1
Manufactured No
D5379-1
Bearpaw Clamp

160 Each 24.0000

**

JUN 16 2017

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

st543

24

142619

24

AN4C11A
Purchased No
AN4C11A
Bolt

160 Each 32.0000

**

JUN 16 2017

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

ST344

32

m136866

32

AN4C17A
Purchased No
AN4C17A
Bolt

160 Each 16.0000

**

JUN 16 2017

DAS 28
6 9-89

DAS 27
9-89

Location

Loc Qty

Loc Code

ST343

16

m136975

16

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Shop Packet Print

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Picklist Print

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Work Order ID: 162401

162401

Parent Item: D117-840-011

D117-840-011

Parent Item Name: BK117/EC145 Bearpaws with Wearplates

Start Date: 6/5/2017

Required Date: 6/8/2017

Start Qty: 1.00

Required Qty: 1.00

MS21043-4

Purchased

No

160

Each

610.0000

20

20

JUN 16 2017

MS21043-4

Nut

**

DAS 6 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

FG

40

104603

40

GA

7

m132803

7

ST302

563

m136983

1

m137361

262

m137371

300

20

NAS1149D0463J

Purchased

No

160

Each

4,888.000

8

8

JUN 16 2017

NAS1149D0463.J

Washer

**

DAS 6 28 9-89

Location

Loc Qty

Loc Code

GA

40

M135056

40

ST260a

4000

M137371

2000

M137699

2000

ST263

848

M137544

848

8

4.0 WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D117-840-011 <i>Bearpaw Installation</i>	27.7 lb 12.6 kg	0.0 in 0.0 mm	0.0 lb-in 0.0 mm-kg	204.1 in 5200 mm	5653 in-lb 65,520 mm-kg

5.0 PARTS LIST

QTY -011	Part Number	Description
X	D117-840-011	BEARPAW INSTALLATION
8	D2274	RADIUS BLOCK
8	D3456-1	WASHER
4	D4012-3	CLAMP CUSHION (REPLACES D4012-1)
2	D5377-1	BEARPAW (REPLACES D4796-1)
2	D5378-041	BEARPAW WEARPLATE ASSY (REPLACES D4798-041)
4	D5379-1	BEARPAW CLAMP (REPLACES D4799-1)
12	AN4C11A	BOLT
8	AN4C17A	BOLT
20	MS21043-4	NUT
12	NAS1149D0463J	WASHER

162401

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Item ID: D117-840-011

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: BK117/EC145 Bearpaws with Wearplates

Stop *NS2*

Start Date: 6/5/2017 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 6/8/2017 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: _____ Process Plan: _____ Date: JUN 12 2017 Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

[illegible]



Transport Canada Transports Canada

Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH13-18

Issue No.: 1

Approval Date: May 23, 2013

Issue Date: May 23, 2013

Responsible Office:

Prairie and Northern

Aircraft/Engine Type or Model:

Eurocopter Deutschland
BK117 A-1, BK117 A-3, BK117 A-4, BK117 B-1, BK117 B-2,
BK117 C-1, BK117 C-2

Canadian Type Certificate or Equivalent:

H-90

Description of Type Design Change:

Bearpaw Installation

**Installation/Operating Data,
Required Equipment and Limitations:**

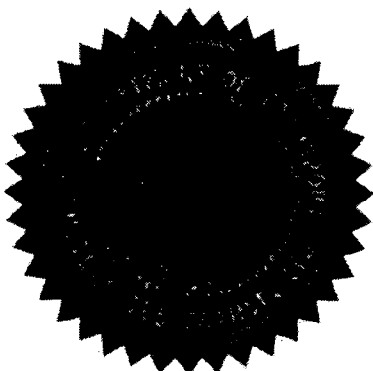
Installation of Bearpaw must be in accordance with Transport Canada Civil Aviation (TCCA) approved Dart Aerospace Ltd. Installation Instructions IIN-D117-840 revision A, dated May 7, 2013 or later TCCA approved revision.

Maintenance of the Bearpaw Installation must be in accordance with TCCA accepted Dart Aerospace Ltd. Instructions for Continued Airworthiness ICA-D117-840 revision 0, dated May 7, 2013 or later TCCA accepted revision.

Definition of the Type Design Change: TCCA approved Dart Aerospace Ltd. Master Document List MDL-D117-840 revision A, dated May 13, 2013 or later TCCA approved revision.

Basis of Certification for affected areas: AWM 529 at amendment 529-4.

— End —



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated **will not** adversely affect the airworthiness of the modified product.

Greg Oucharek
For Minister of Transport

Canada